



- True RMS Measurement
- Waveform Display for Voltage and Current
- Graphical Phasor Display
- Harmonics Spectrum Bar Graph Display
- 4 Quadrant Energy Measurement
- Demand for kW, kVA and Ampere (Max, Previous, Rolling)
- Info / Event Summary Page Display
- Phase Supply LED Indicator
- Phase Rotation Indication
- Complies with IEC-61326-1
- External Plug-in Module for RS-485 Modbus RTU Model: A-01s (isolated type)

technical data

Network Type

3P4W, 3P3W, 3P3W (Aron)

Display Type

Graphical LCD with white LED backlight

Current Measurement

AC Input Range : 0.005 ~ 6.500 A
 Accuracy : $\pm 0.5\%$
 CT Range : 0 ~ 10,000 / 5A
 Burden : < 0.1 VA at 5A

Voltage Measurement

AC Input Range : 0~300 VLN , 0~500 VLL
 Accuracy : $\pm 0.5\%$
 VT Range : 1.0 ~ 2500.0 : 1

Power Measurement

Accuracy (W, Var, VA, PF, Cos Φ) : $\pm 1.0\%$

Frequency Measurement

Range : 45 ~ 65 Hz
 Accuracy : $\pm 0.1\%$

Energy Measurement (4 Quadrant)

Range : 0.0 ~ 9,999,999,999.9
 (kwh, kVAh, kVAh)

Communication

A-01s : Modbus RTU RS-485 (isolated type)
 Plug in module with selectable baud rate (kbps)
 (sold separately) 0.6, 1.2, 2.4, 4.8, 9.6, 19.2, 38.4

Aux Power Supply

AC range : 65 ~ 275 Vac, 45 ~ 65 Hz
 DC range : 90 ~ 300 Vdc
 Consumption : < 3VA

Mechanical

Operating Temp. : -5°C ~ +55°C
 IP Rating : IP54 (front panel)
 Installation : Panel flush mount
 Dimension (mm) : 99.2 (h) x 99.2 (w) x 45 (d)
 Weight : approx. 310 gram

measured parameters

Voltage : V1, V2, V3, V12, V23, V31, V asymmetry

Current : I1, I2, I3, In

Power : P1, P2, P3, ΣP

Reactive Power : Q1, Q2, Q3, ΣQ

Apparent Power : S1, S2, S3, ΣS

Active Energy : Import and Export (kwh)

Reactive Energy : Inductive and Capacitive (kVarh)

Apparent Energy : (kVAh)

Frequency : Hz

Power Factor : PF1, PF2, PF3, PFavg

Displacement Power Factor:

Cos Φ 1, Cos Φ 2, Cos Φ 3, Cos Φ avg,
 360° phasor angle measurement for
 V1, V2, V3, I1, I2, I3, In

Max / Roll / Prev. Demand :

I1, I2, I3, Iavg, P1, P2, P3, ΣP , S1, S2, S3, ΣS

Harmonics:

1st to 31st (odd harmonics) for Voltage and Current

Total Harmonic Distortion : Voltage and Current

Min/Max events (V,I, thd-V, thd-I & P) with elapsed time for max

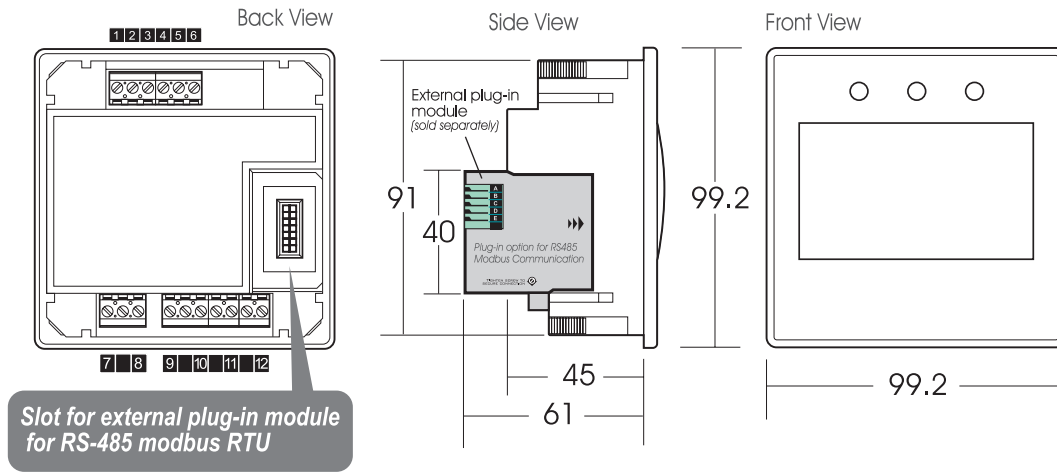
k-Factor measurement for Ampere :

kF1, kF2, kF3 (indicative)

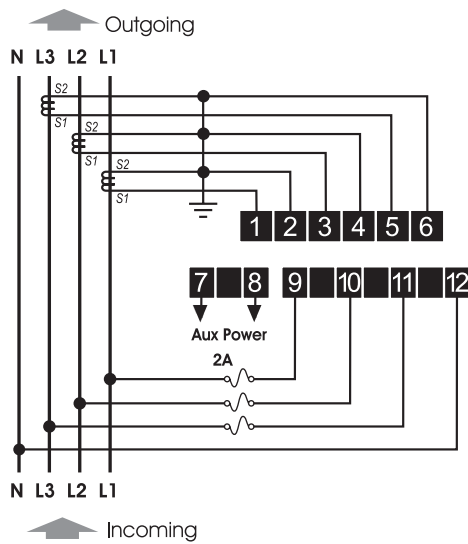
Running Hours

Hour Run

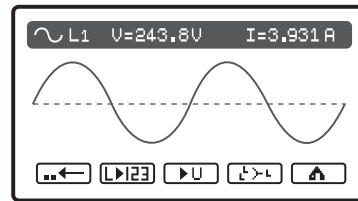
casing dimension



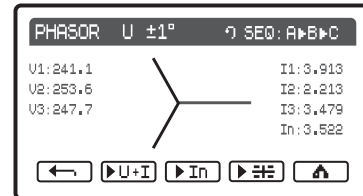
wiring diagram



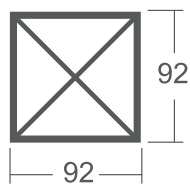
display : voltage & ampere waveform



display: phasor angle definition

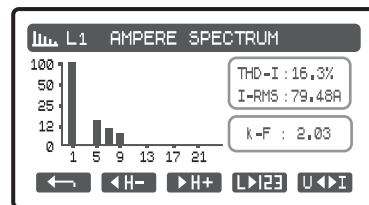


panel cut-out



Panel Cut-out : 92 x 92

display : total harmonic distortion



ordering information

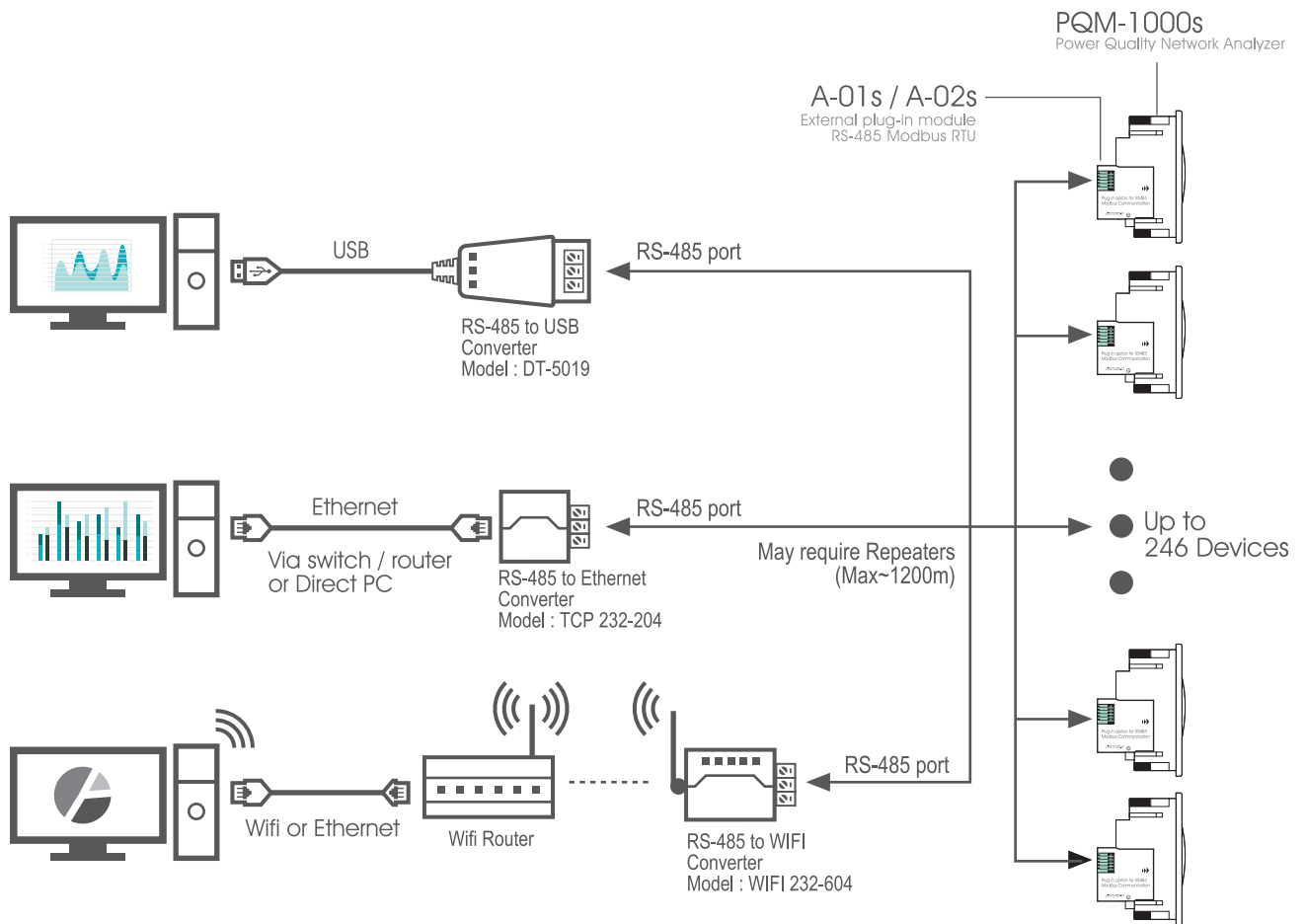
Model	Description
PQM-1000s	65 ~ 275 Vac (45~65 Hz) 90~300 Vdc

Note: All measurement in mm.

PQM-1000s

Live Monitoring & Energy Management System

- Identify **Wastages** by comparison of Energy Consumption Pattern
- Identify **Power Quality** Issues by monitoring Voltage Fluctuations and Total Harmonic Distortion
- Identify **Consumption Pattern** to reduce Maximum Demand charges

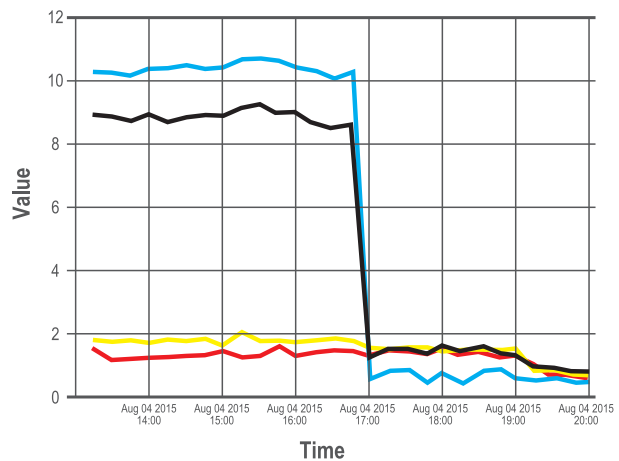


Comprehensive i3EnMs Energy Management Software (Optional)

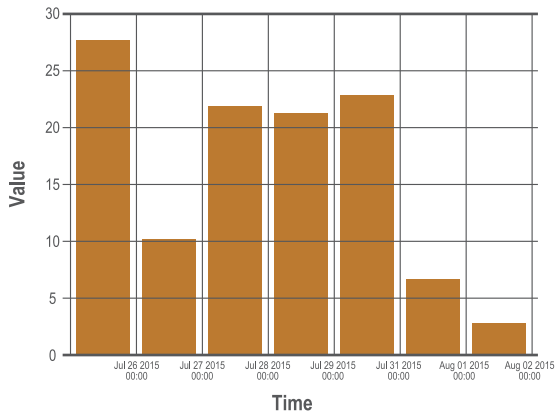
Real Time / Instantaneous Electrical Parameters

	3-Phase	Single Phase1	Single Phase2	Single Phase3	Neutral
Voltage					
Voltage Phase - Phase (V)	430.20	430.40	431.60		
Voltage THD (%)	1.70	0.50	0.80		
Voltage Phase - Neutral (V)	249.00	247.70	249.30		
Current					
Current (A)	158.96	144.44	145.72	86.36	
Current THD (%)	16.30	2.00	5.00		
Energy					
Active Energy Consumed (kWh)	389.4				
Reactive Energy Consumed (kVAh)	68.00				
Power					
Active Power (kW)	35.34	35.63	35.74		
Reactive Power Consumed (kVAR)	16.55	3.10	-8.29		
Power Factor	0.96	0.89	1.00	-0.98	
Maximum Demand					
Maximum Demand (kW)	106.71				
Frequency					
Frequency (Hz)	50.00				

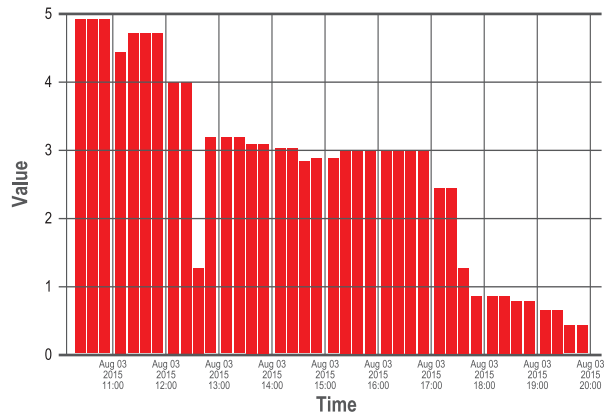
Load Current Trending Line Graph



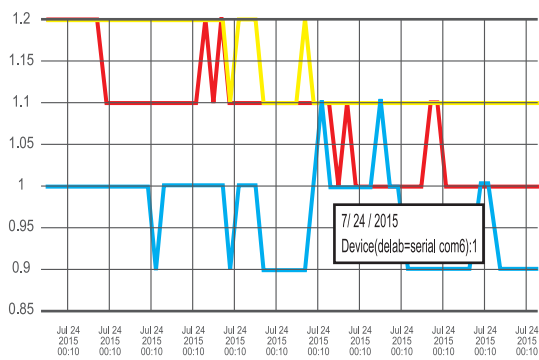
Daily kWh Consumption Pattern



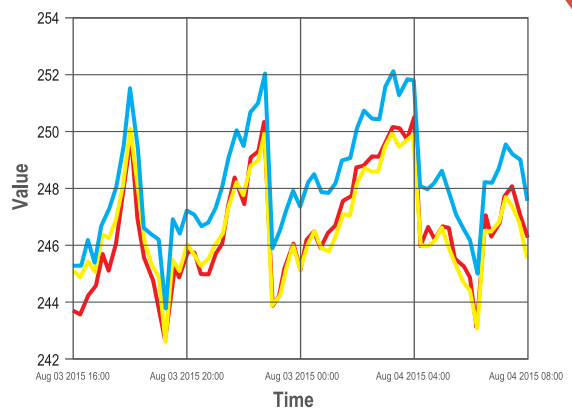
MD Analysis



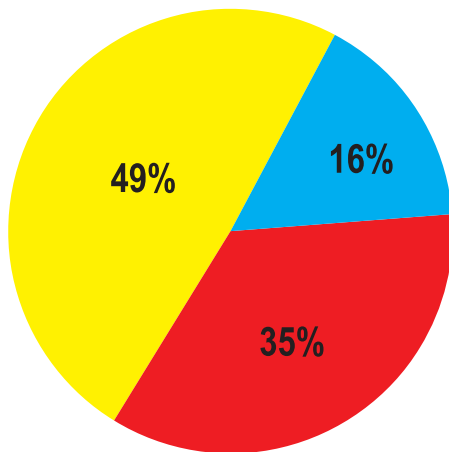
Power Quality



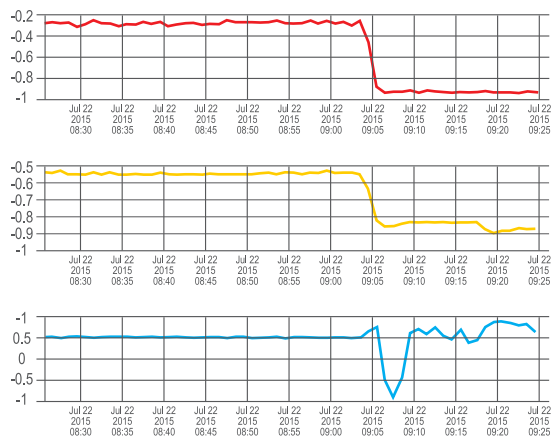
Voltage Supply Trending



Pie Chart Analysis & Report



Comparative Analysis & Report



ordering information

Model	Description
DT-5019	RS-485 to USB converter
TCP 232-204	RS-485 to Ethernet converter
WIFI 232-604	RS-485 to WIFI converter